A Great Deformation: Fifty Years of Regressive Redistribution in the US Economy

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Main Points I

- The American economy suffers from long-term increasing inequality of income and wealth in a dynamic process that will not be easy to stop.
- The key driving force is 0.4% annual growth over 5 decades of the profit share of primary (wage + profit) income – a major distributional shift.
- The extra profits have mostly gone to high income and wealth (top 1%) households. The bottom 99% have all lost ground, partly offset by fiscal transfers at the bottom.

Main Points II

- Despite the increase in profits and low interest rates after the Volcker shock the ratio of investment to GDP fell from a cyclical peak of 21% in the late 1970s to 18% now.
- Meanwhile the ratio of consumption to GDP has gone up from around 60% to 68%.
- Workers have been pushed into low wage, low productivity sectors, contributing to an overall productivity slowdown. Both static and dynamic sectors have had lagging wage growth.

Main Points III

- Demand growth for manufacturing, information, and a few other dynamic sectors is offset by rising productivity so they do not create jobs. Their wages are relatively high.
- Jobs trickle down to low-wage low-productivity education-health, business service, and accommodation-food sectors with rising demand but slow productivity growth.
- Natural interpretation is that slow productivity growth becomes endogenous as a means to absorb surplus labor (reverse Lewis & Sen)

Main Points IV

- If there is positive demand feedback it comes from more stagnant sector workers consuming the products that they produce (health care, fast food, call centers).
- There are adverse Impacts on the middle class, which has not benefitted strongly from fiscal transfers net of taxes.

Main Points V

- Low interest rates were made possible by the absence of labor bargaining power and thus low inflationary pressure from wage costs.
- Consequences were high asset prices, wealth increases due to capital gains at the top, and financialization.
- Reversing Karl Polanyi's *Great Transformation,* economic deformation is happening.
- In sum, the economy has become dualistic in several ways:

Main Points VI

- Generalized wage repression leading to low interest rates and high asset prices
- Greater income and wealth inequality
- Shift in employment toward sectors with low wage and productivity levels and slow productivity growth.
- Consumption increases linked to low or negative saving from the 99%.
- We are now seeing the political repercussions.

Details I

- Set up national income and wealth accounts in SAM and WAM form. Use CBO distributional data (beginning in 1986) scaled to the national accounts – a fabrication that is “roughly right” because of the double-entry accounting consistency which underpins the matrixes.
- Analyze size distributions of income and wealth in terms of three groups categorized by percentile shares of the totals – standard practice. Groups do not contain the same people from the 1980s until now, but probably they do not differ a lot.

Details II

- Profits largely flow to the top 1%. Channels include interest and dividends, proprietors' incomes, and capital gains (not included in the national accounts and subject to low tax rates).
- These flows are supplemented by share buybacks, really a tax-avoiding equity-for-debt swap between business and households, financed by new business debt which ends up being held by households.

Details III

- "Middle class" households (in the 61st to 99th percentiles of the size distribution) rely mainly on wage incomes.
- Bottom 60% households rely roughly equally on wages and fiscal transfers net of taxes. They appear to have negative saving and negligible wealth.
- After transfers and capital gains, the share of the top 1% has risen, while the bottom 60% income share has been stable. Hence the middle class has been squeezed.

Details IV

- “Palma ratios” between household incomes of the top 1% and other groups emphasize disparities across the size distribution.
- Ratios have gone up steadily at growth rates exceeding 3% per year – a huge distributional shift.
- Sectors with low wages and slow labor productivity growth increased their employment share from 47% to 61% between 1990 and 2016.

Details V

- Sources of inequality -- institutions and rules of the game have affected distribution *dynamics* by holding down wage growth. A policy fixation with "expansionary austerity" has provided the ideological backdrop.
- *Static* "monopoly" power of business to push up prices against wages, or "monopsony" power to hold down wages are less significant – they do not cumulate over time.
- Also consider forces producing greater wealth inequality.

Details VI

- Results from a Goodwin-Kaldor-Pasinetti simulation model.
- Once-off distributional policies (tax/ transfer packages, higher minimum wages, etc.) wouldn’t affect Palma ratios very much – no way for them to cumulate.

Details VII

- Palma ratios could return to 1980s levels over 40 years if (i)wage growth rate for lower income groups exceeds productivity growth rate by 0.35%; (ii) proprietors' income for the top 1% falls; (iii) financial transfers to the top 1% fall.
- Wage growth alone might account for one-half of the improvement.

Details VIII

- Even with income redistribution, the wealth share of the top 1% could rise from 40% to around 60% due to income growth and high saving rates at the top.
- A wealth fund (possibly financed by a capital gains tax) could offset, transferring money downward and building up its own resources.

Details on productivity

- Growth decompositions of profits and employment rely on macro and sectoral levels of labor productivity. It is just a ratio,
- Productivity = Real output ÷ Employment

It is often assumed to have its own proper dynamics and is helpful for accounting:

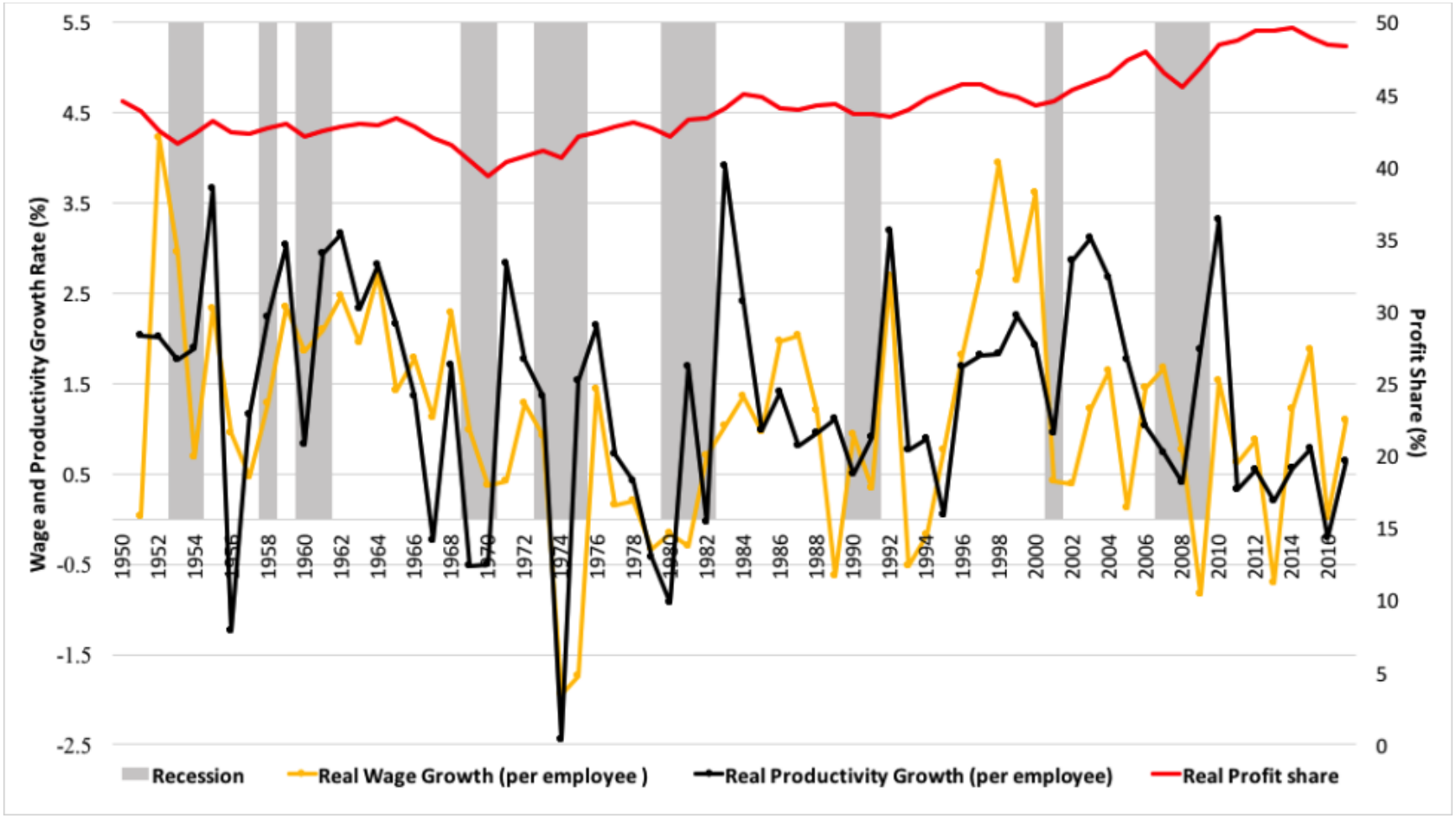
Employment = Real output ÷ Productivity

Wage share = 1 – Profit share
= Wage ÷ Productivity

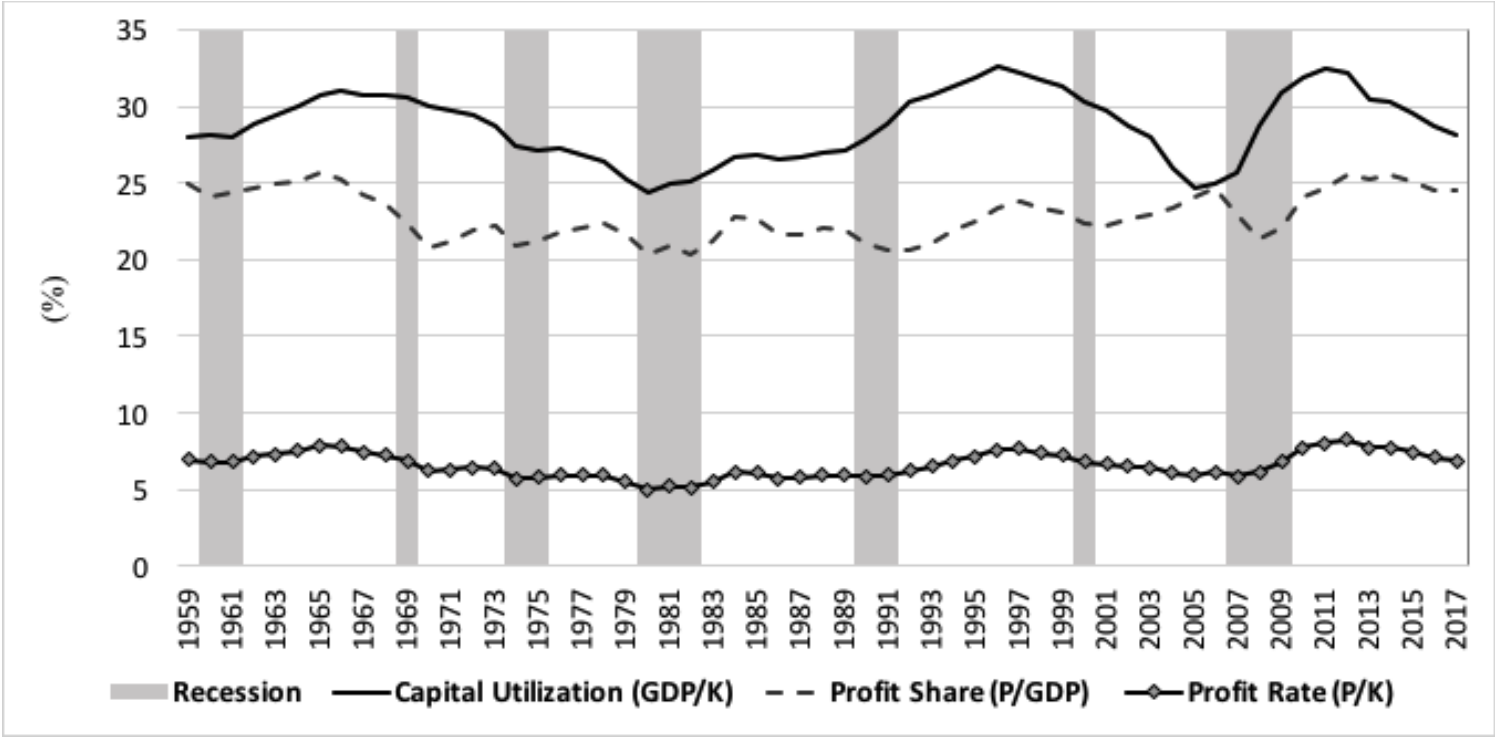
Rising profit share since 1970

- The root of regressive change in the size distribution of household incomes is the split of value-added between profits and labor payments.
- Real wage growth has lagged productivity growth for almost 50 years.
- Profit share grew at an 0.43% rate, 1970-2018. Real profits grew at 3.2% per year vs 2.8% for real GDP. Small growth rate differences cumulate!

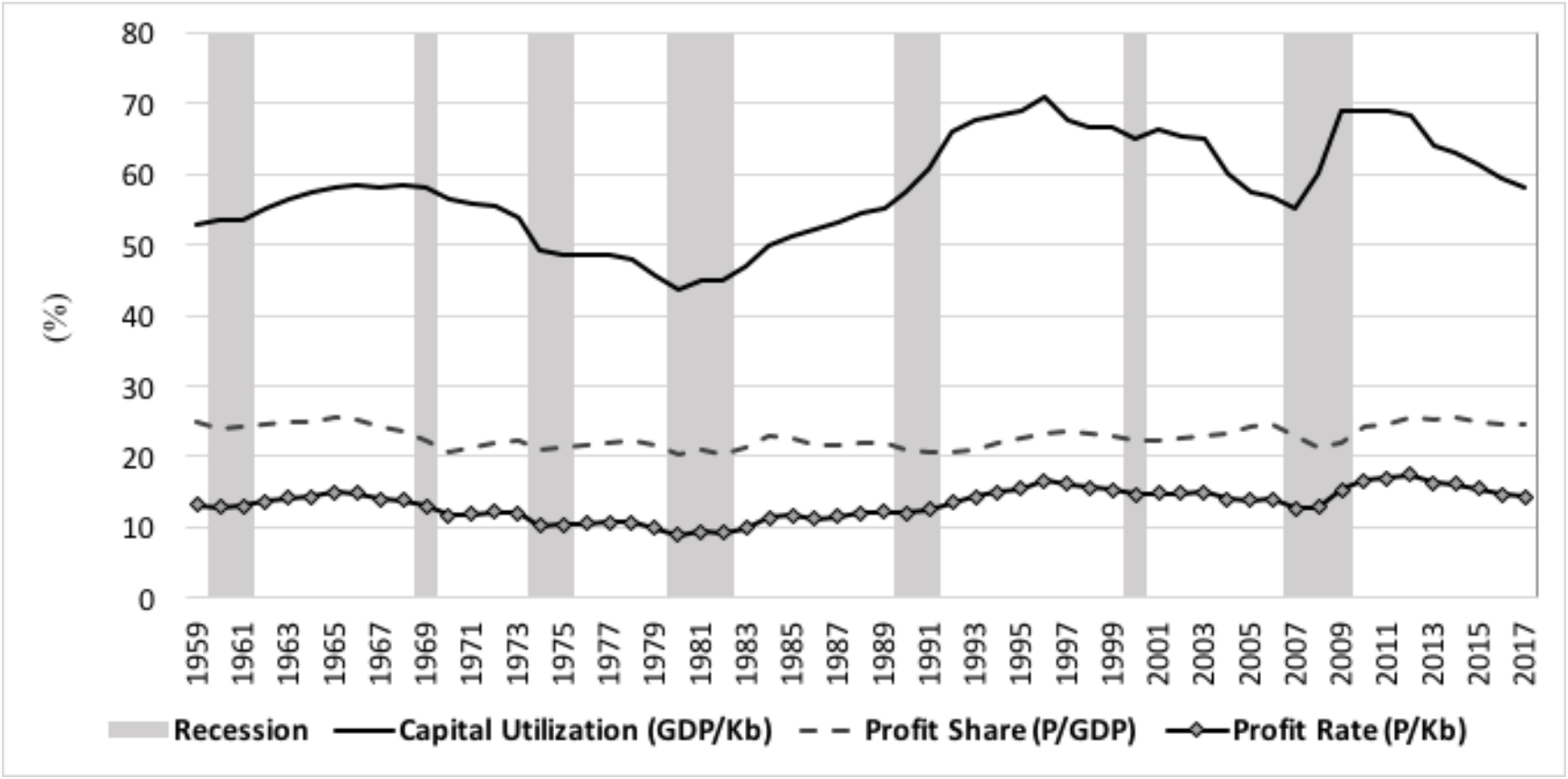
The Rising Profit Share Over Five Decades is due to Wage growth < Productivity growth



Profits vs total capital stock



Profits vs business capital stock



More on Profits I

- Cyclical pattern (Marx-Goodwin) superimposed on a rising profit share : Except around 1995 and 2015 productivity growth leads real wage growth as economy emerges from recessions (shaded). On average since 1970, productivity growth has been stronger. Subsequent wage growth and a dip in the profit share lead into recession (often blamed on the Fed but deeper forces at work).

More on Profits II

- Profit rate = Profit share × [Output ÷ capital]
- Ratio of real GDP to both total and business capital has drifted upward since 1980
- Hence the profit rate has drifted upward as well.
- Diagrams are consistent with the (controversial) interpretation that demand in the US economy is “profit-led” and that there is a high output “profit-squeeze”.

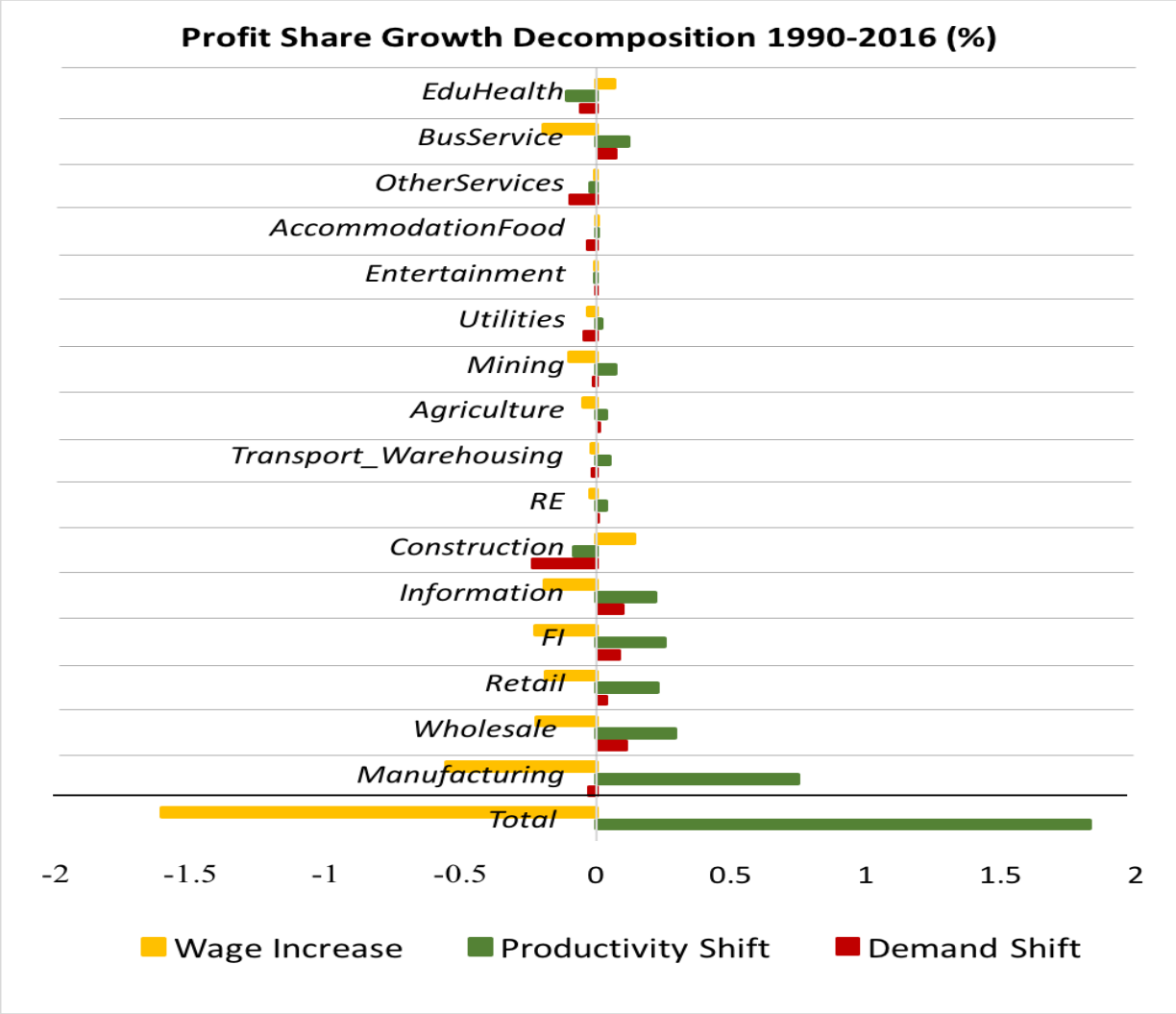
More on Profits III

- Overall growth of the profit share can be expressed as a weighted average of all sectors' productivity growth (+), output share growth (+), and real wage growth (-). Weights are ratios of sectoral wage shares to overall profit share.
- If the output share rises for sectors with low own-productivity growth rates then the overall profit growth rate slows down.
- There is an offsetting effect in sectors where own-productivity growth exceeds wage growth.

Sectoral Profits

- Demand shifts + productivity growth outweighed wage increases for information, wholesale and retail trade, and finance-insurance. They contributed to profit growth but their overall share of profits is around 7%. Manufacturing adds another 7%.
- “Real estate rental and leasing” generates more than 25% of total profits but did not add to profit growth.
- Employment-generating education-health, business services, and accommodation-food account for 11% of the total but also did not contribute much to overall profit share growth.

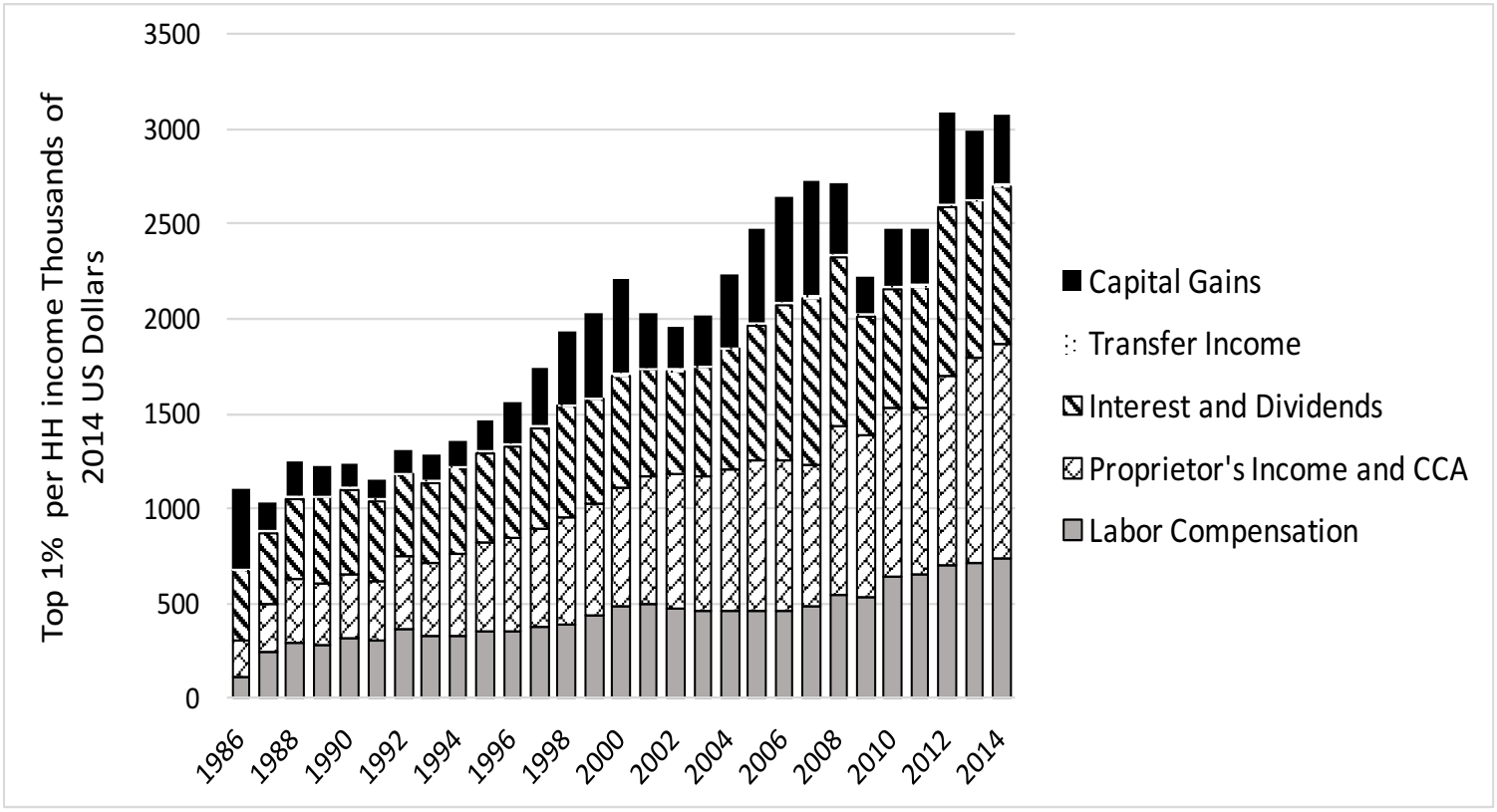
Profit share growth decomposition



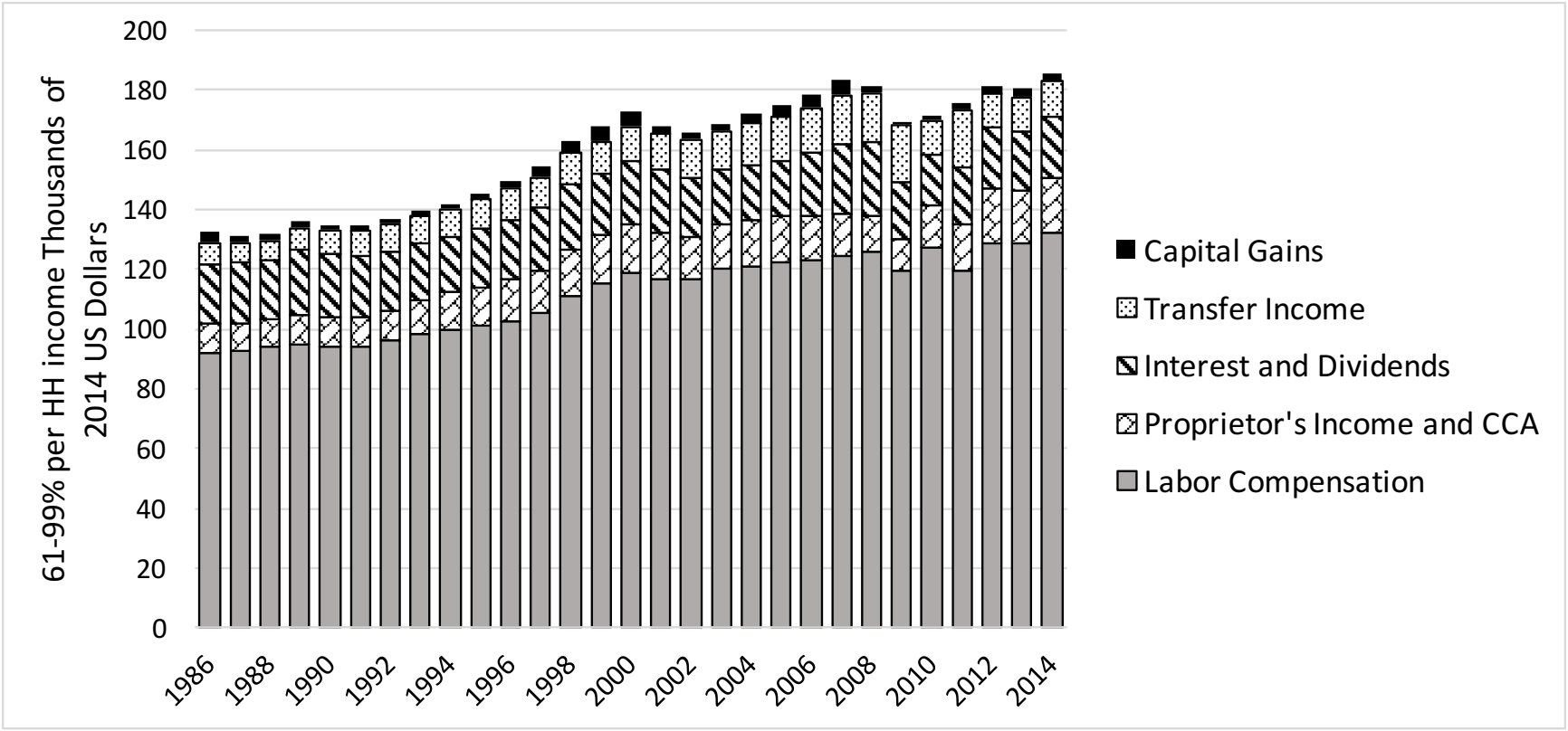
Three income classes

- The richest one percent of households rely heavily on profit-related incomes ("labor compensation" includes options and bonuses). They are the big gainers.
- A "middle class" between the 61st and 99th percentiles of the house size distribution of income gets most income from labor compensation.
- The bottom 60% rely on wages and transfers.
- The USA has a three-class economy. Note the differences in scales for incomes per household in the diagrams!

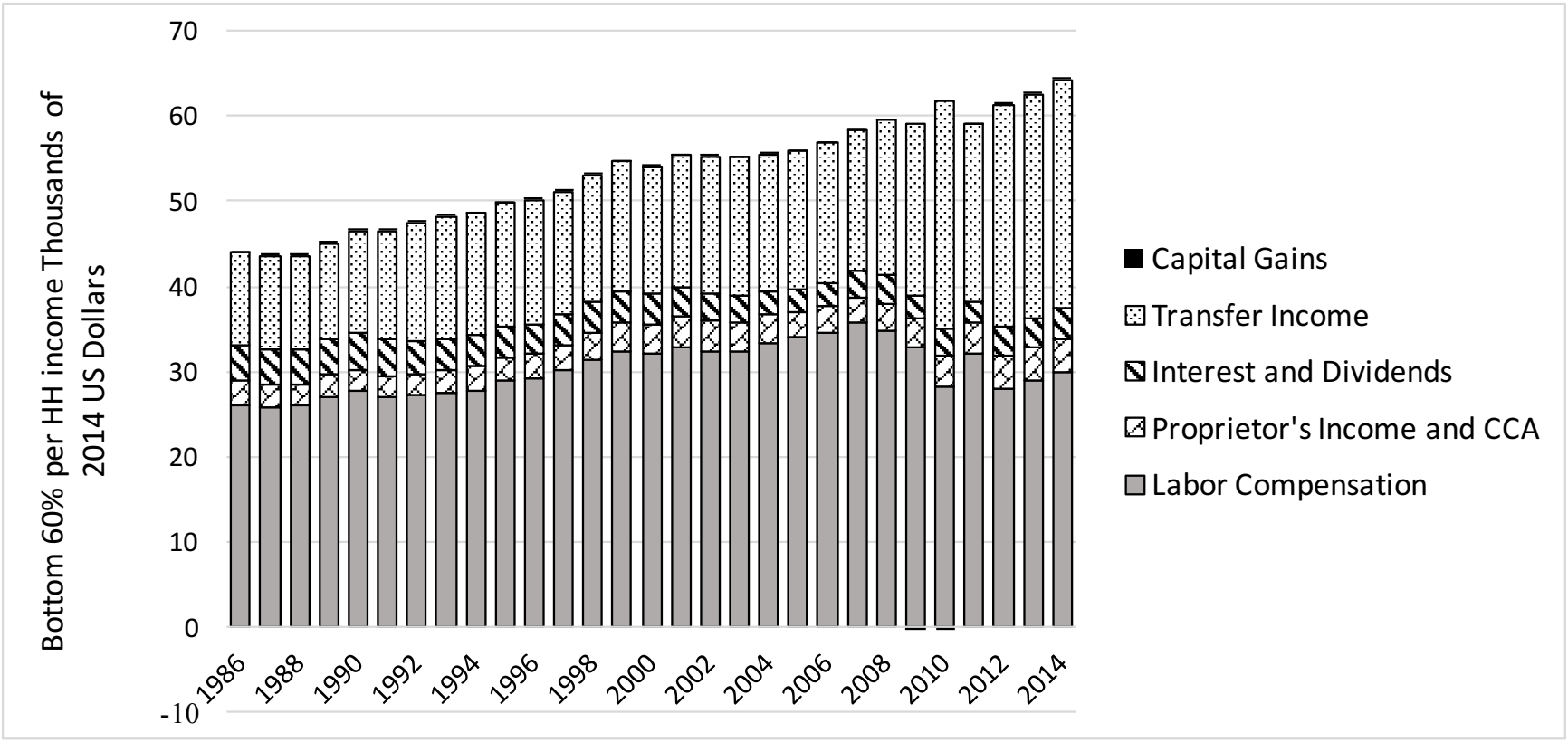
Income sources at the top



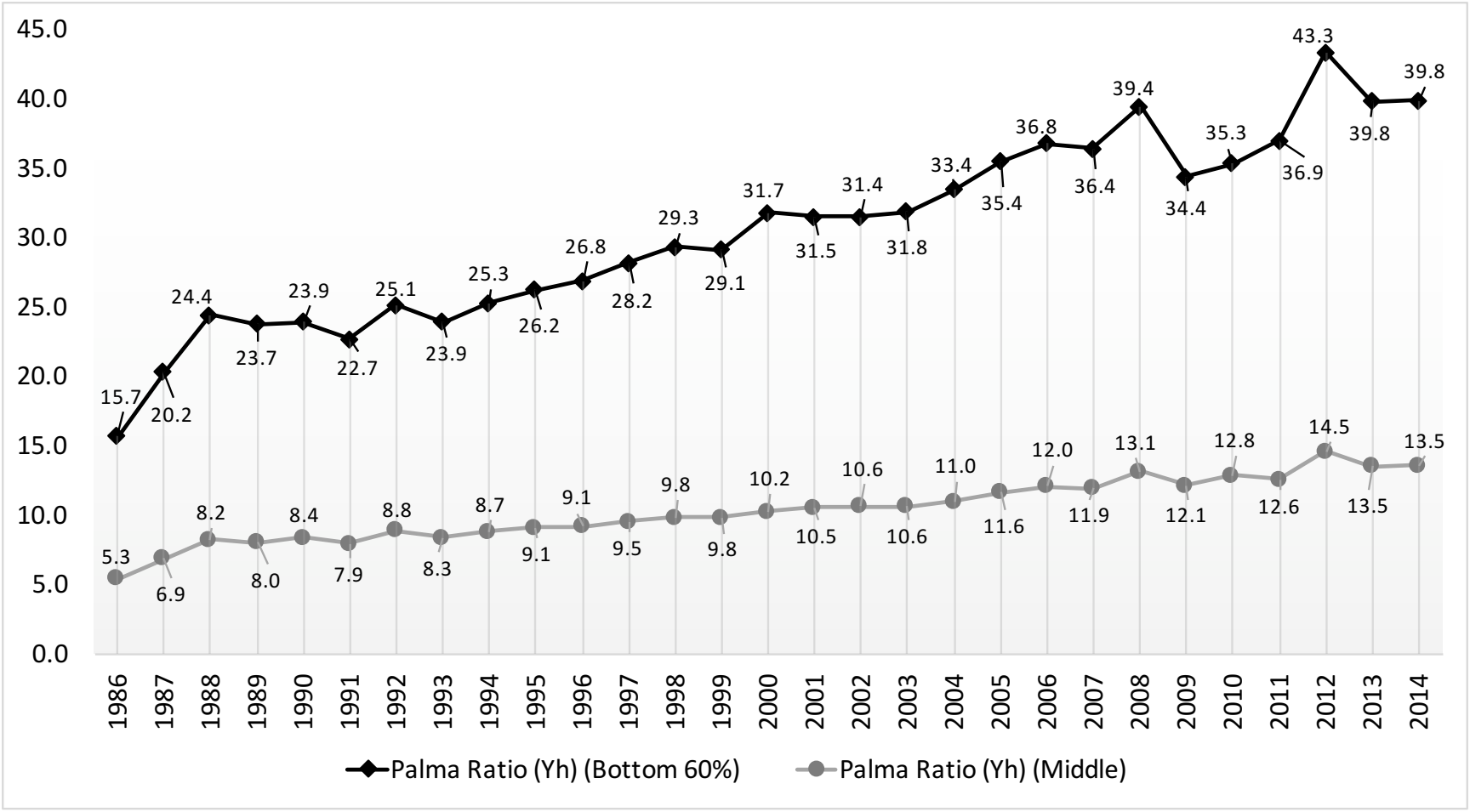
Middle class relies on labor income



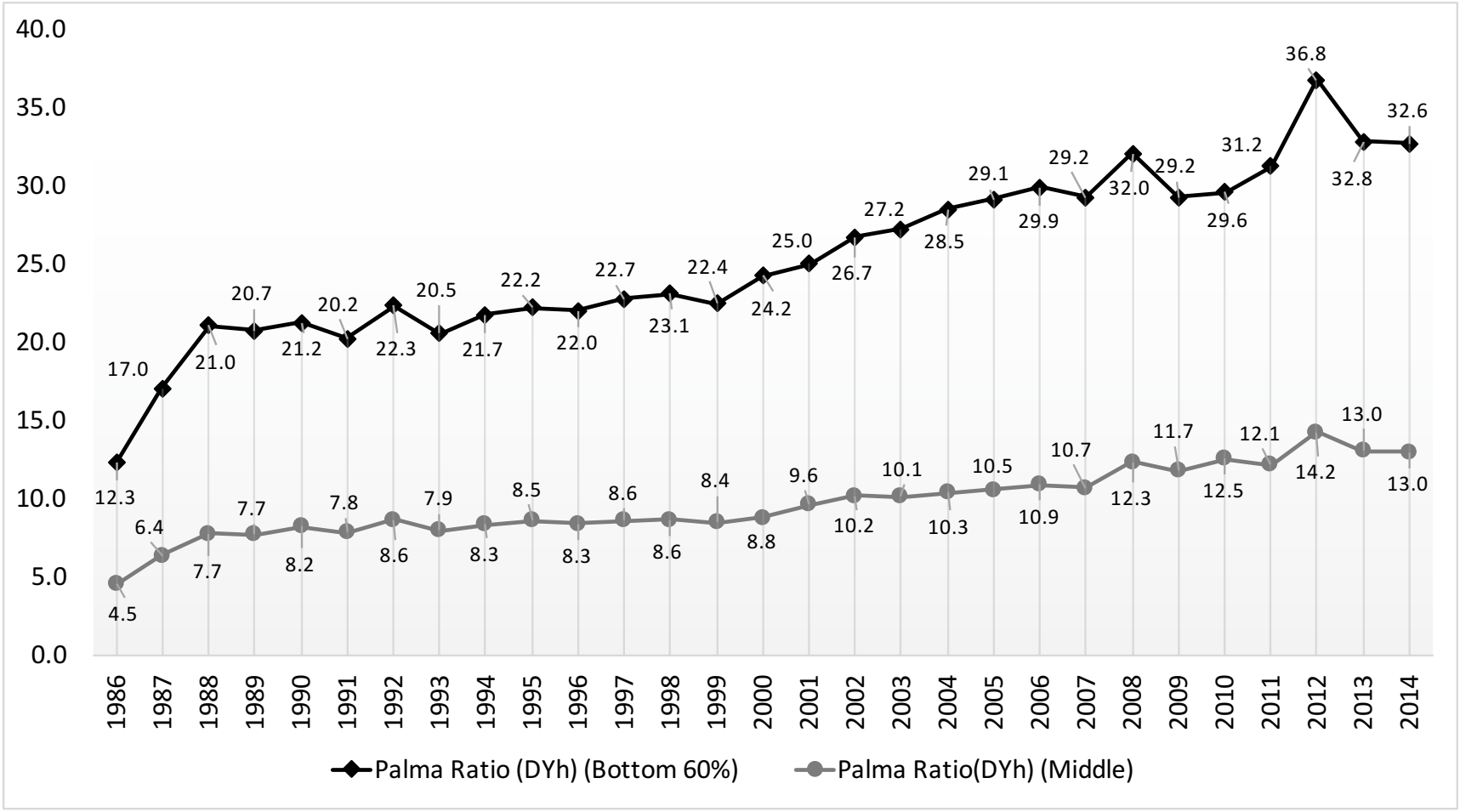
Transfers and labor income at the bottom



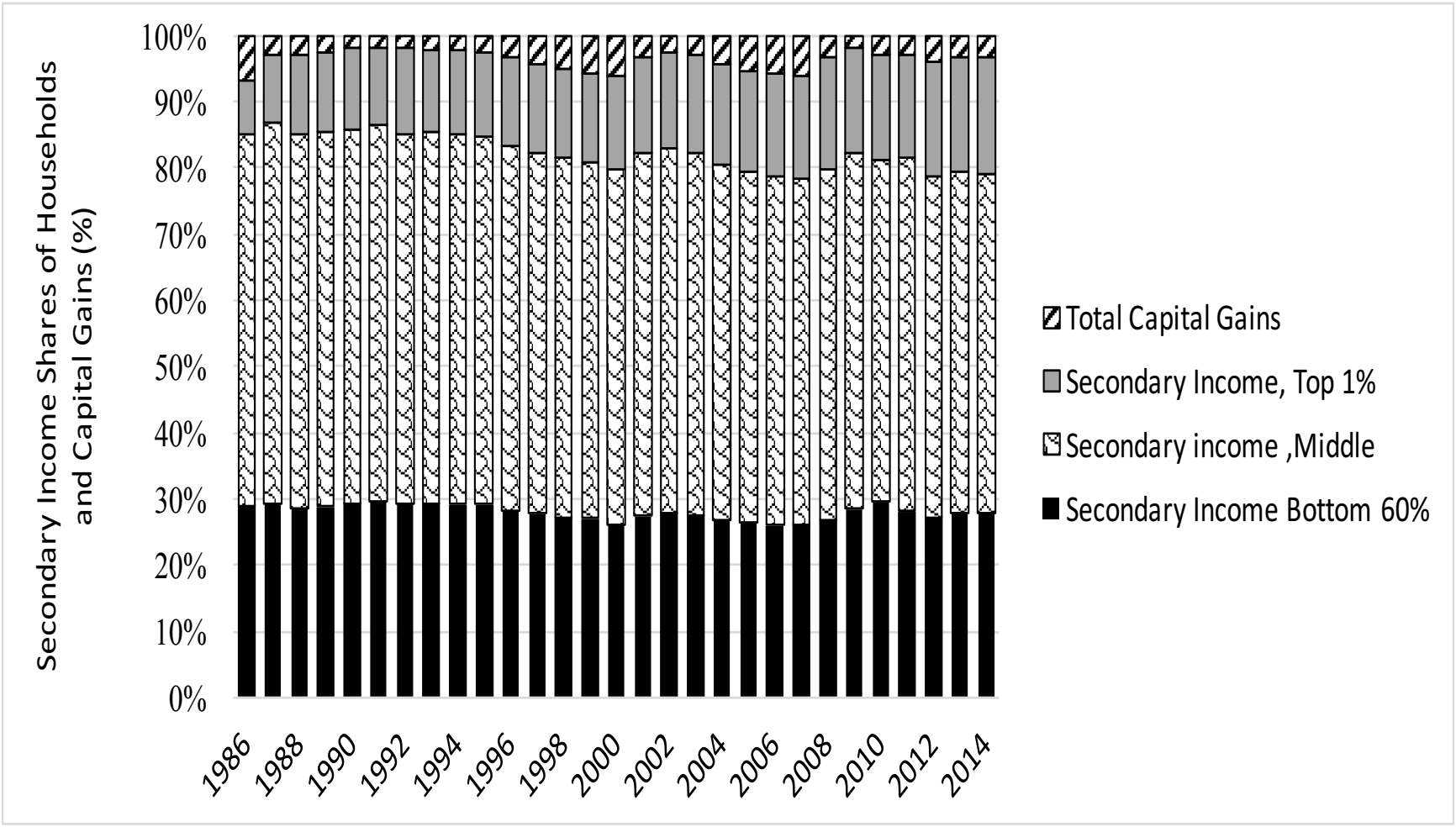
Palma ratios for top 1% vs 61-99 %-ile households and lower 60% based on total income per household



Palma ratios for top 1% vs 61-99 %-ile households and lower 60% based on disposable income per household



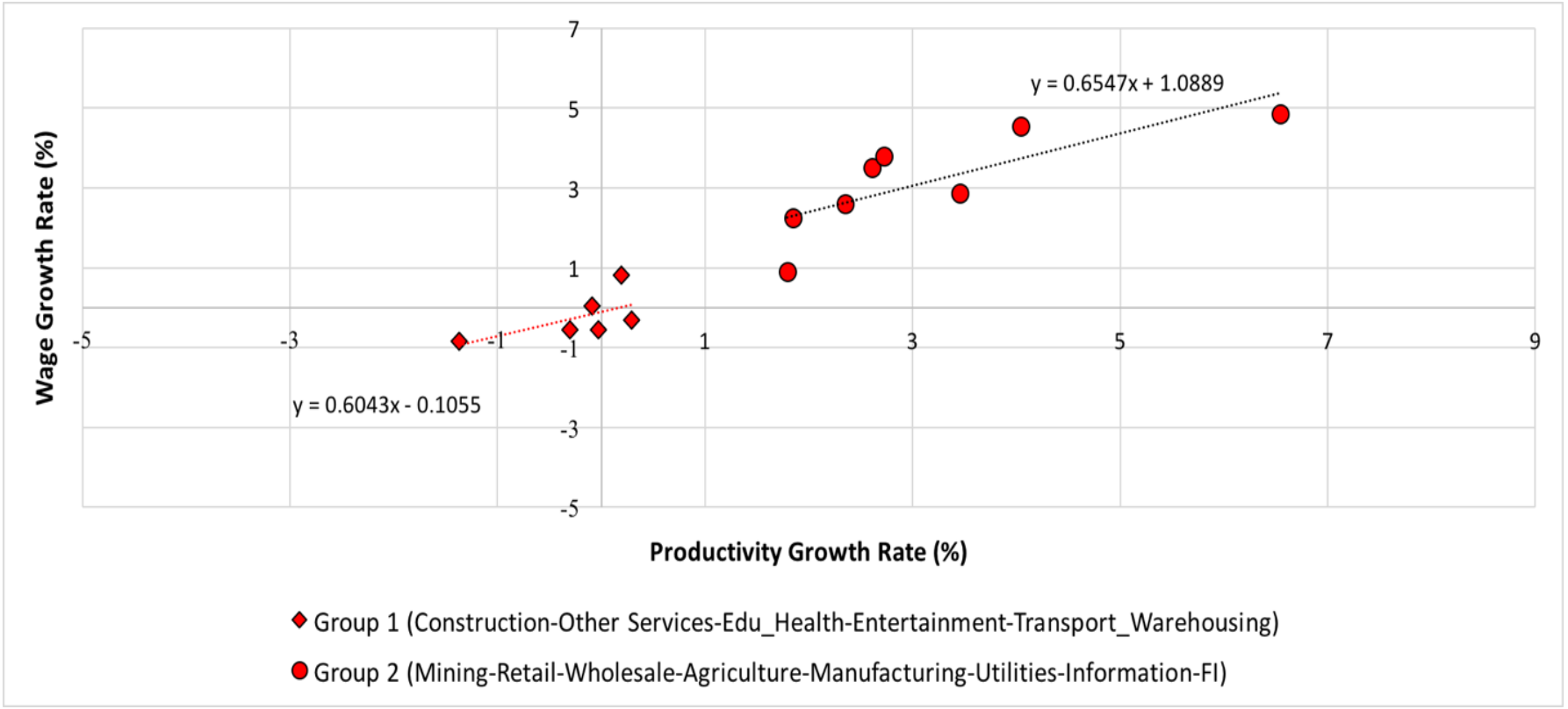
Middle class income squeeze



Dualism in production I

- Old development economics idea was that "surplus labor" would move toward sectors with rapid productivity and demand growth (Arthur Lewis).
- Reverse is true for USA – overall economic growth has been associated with movement of employment toward 7 low wage, low productivity sectors.
- Dynamic sectors (9 of them) pay higher wages, but do not have faster wage growth than the laggards.
- Probably, generalized wage suppression goes hand-in-hand with slow productivity growth – you don't need higher productivity if you can already hold down labor costs via wages.

Sectoral growth rates of productivity and real wages, 1990-2016 (trends omit real estate and computers)



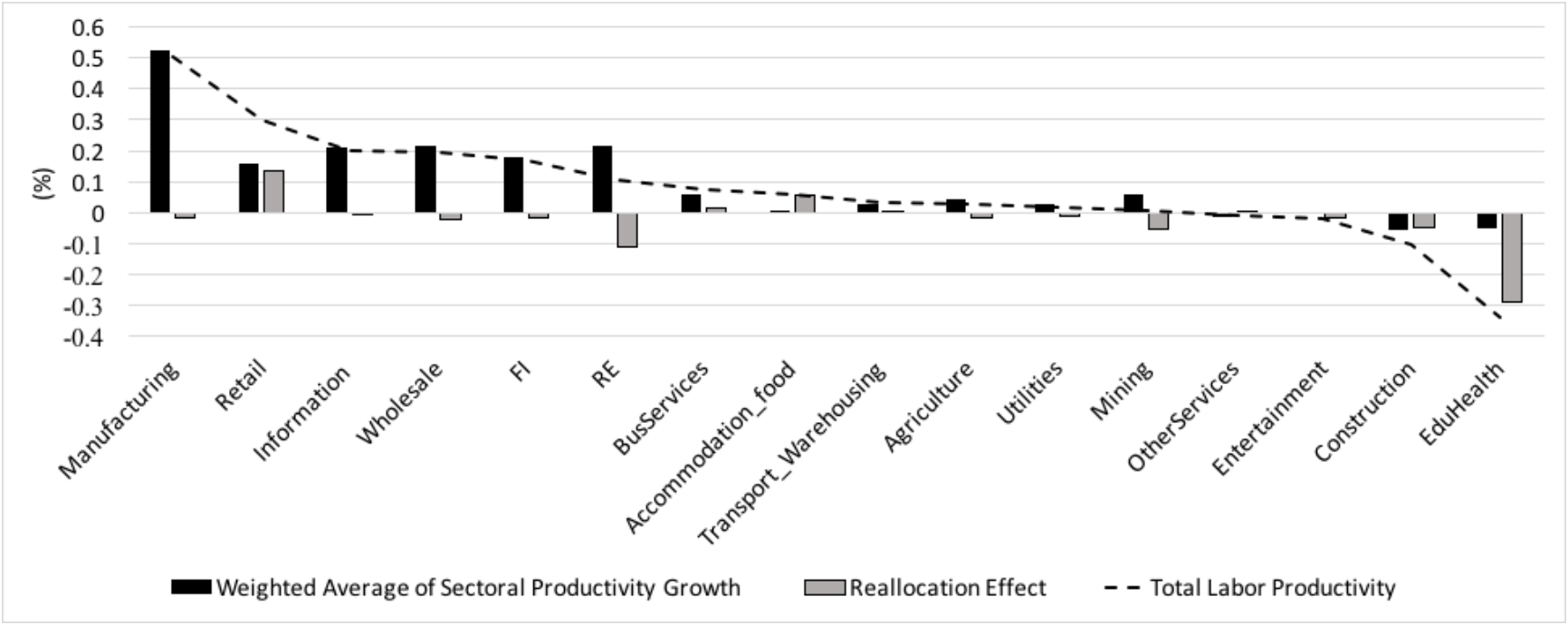
Summary data for the sectors

SECTORS	PRODUCTIVITY GROWTH RATE (%)			REAL WAGE (per employee) GROWH RATE (%)			REAL WAGE LEVEL (Total thousands of $)		EMPLOYMENT SHARE (%)		REAL WAGE SHARES IN TOTAL (%)		OUTPUT Growth (Current %)	OUTPUT Growth (Real %)
	INITIAL (1991)	FINAL (2016)	AVERAGE (1990-2016)	INITIAL (1991)	FINAL (2016)	AVERAGE (1990-2016)	INITIAL (1990)	FINAL (2016)	INITIAL (1990)	FINAL (2016)	INITIAL (1990)	FINAL (2016)	AVERAGE (1991-2016)	AVERAGE (1991-2016)
Computer and Electronic Products	18.46	5.30	17.36	10.88	5.70	16.11	3.41	146.12	2.02	0.84	0.16	2.15	3.91	15.06
Agriculture	-1.88	9.65	4.86	6.59	21.17	6.54	5.27	21.01	3.42	1.97	0.42	0.73	3.13	3.53
Information	0.57	4.01	4.54	-0.59	2.02	4.04	43.23	120.14	2.85	2.24	2.87	4.72	4.83	4.55
Manufacturing	1.96	0.36	3.80	2.53	1.31	2.72	36.17	72.07	18.76	9.92	15.76	12.51	2.95	2.43
Wholesale	5.12	-0.03	3.51	4.81	-0.01	2.61	40.97	78.52	5.58	4.70	5.31	6.47	4.59	3.72
Mining	5.65	2.47	2.87	19.86	8.92	3.45	96.00	148.51	0.81	0.54	1.81	1.39	5.74	2.36
FI	5.56	-3.88	2.60	0.31	-4.66	2.35	49.46	88.89	5.27	4.93	6.06	7.68	5.65	3.42
Retail	1.56	2.96	2.24	2.15	1.76	1.85	21.40	34.25	13.97	12.71	6.95	7.62	3.98	3.07
RE	0.54	1.60	1.60	-2.84	-2.14	1.01	45.62	58.83	1.74	1.72	1.84	1.77	5.00	2.51
Utilities	-3.00	4.42	0.91	-1.72	7.32	1.79	90.67	137.70	0.78	0.45	1.65	1.08	2.71	0.08
Transport_Warehousing	3.47	-2.02	0.80	2.40	-0.72	0.19	51.84	54.02	3.68	4.02	4.44	3.81	4.64	2.32
Business Services	-2.49	0.05	0.48	-0.94	-0.48	0.82	61.67	75.87	11.50	16.09	16.47	21.38	5.82	2.89
Accomodation_Food	-1.82	-1.71	0.05	-1.86	-2.47	-0.09	22.86	22.19	8.64	10.76	4.59	4.18	5.18	1.97
Entertainment	-5.57	-0.77	-0.31	-3.41	-0.71	0.30	38.67	41.48	1.20	1.81	1.08	1.31	5.45	2.46
Education_Health	-2.49	-0.68	-0.56	-2.47	-0.90	-0.31	55.82	51.47	11.69	18.17	15.15	16.37	5.61	2.26
Other Services	-1.91	-0.43	-0.56	-1.52	-1.32	-0.03	43.05	42.54	4.52	4.57	4.52	3.40	3.94	0.63
Construction	1.74	-0.76	-0.85	2.12	-0.71	-1.37	85.58	59.18	5.58	5.40	11.10	5.59	4.80	0.16

Dualism in production II

- Overall labor productivity growth decomposes into a weighted average of sectoral own-rates of productivity growth (+) and employment growth (+/-).
- Weights are output shares and differences between output and employment shares respectively.
- Education-health is a major drag on productivity

Sectoral contributions to overall labor productivity growth (double-deflated chain-indexed output levels)



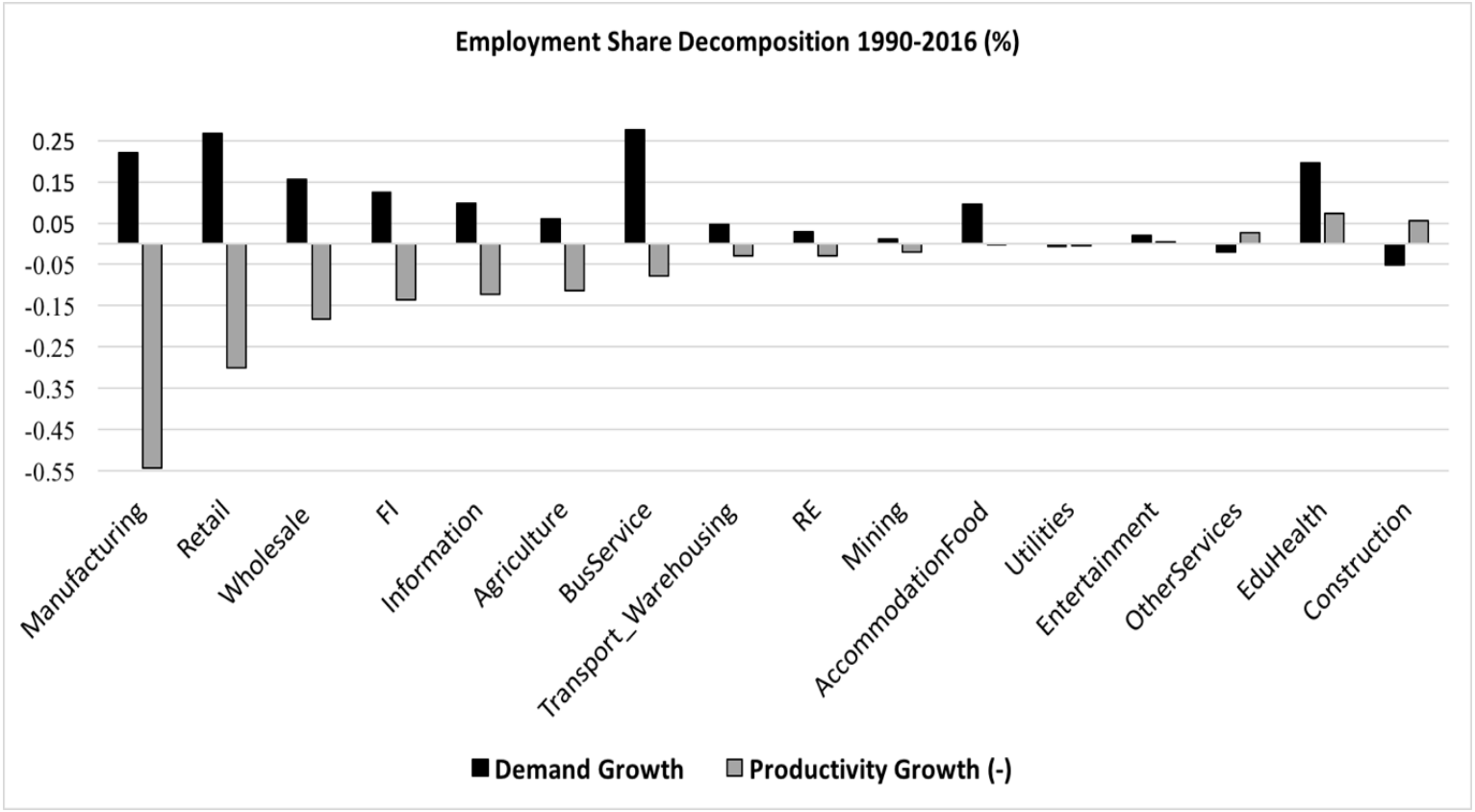
Dualism in production III

- As noted, employment has shifted toward lagging sectors. Their share of employment exceeds their share of wages. Low productivity and high employment growth rates are vehicles for these sectors to absorb labor displaced from manufacturing, etc.
- Growth of the ratio of employment to population is a weighted average of sectoral productivity growth (-) and growth of output per capita (+).
- Weights are sectoral shares of total employment.

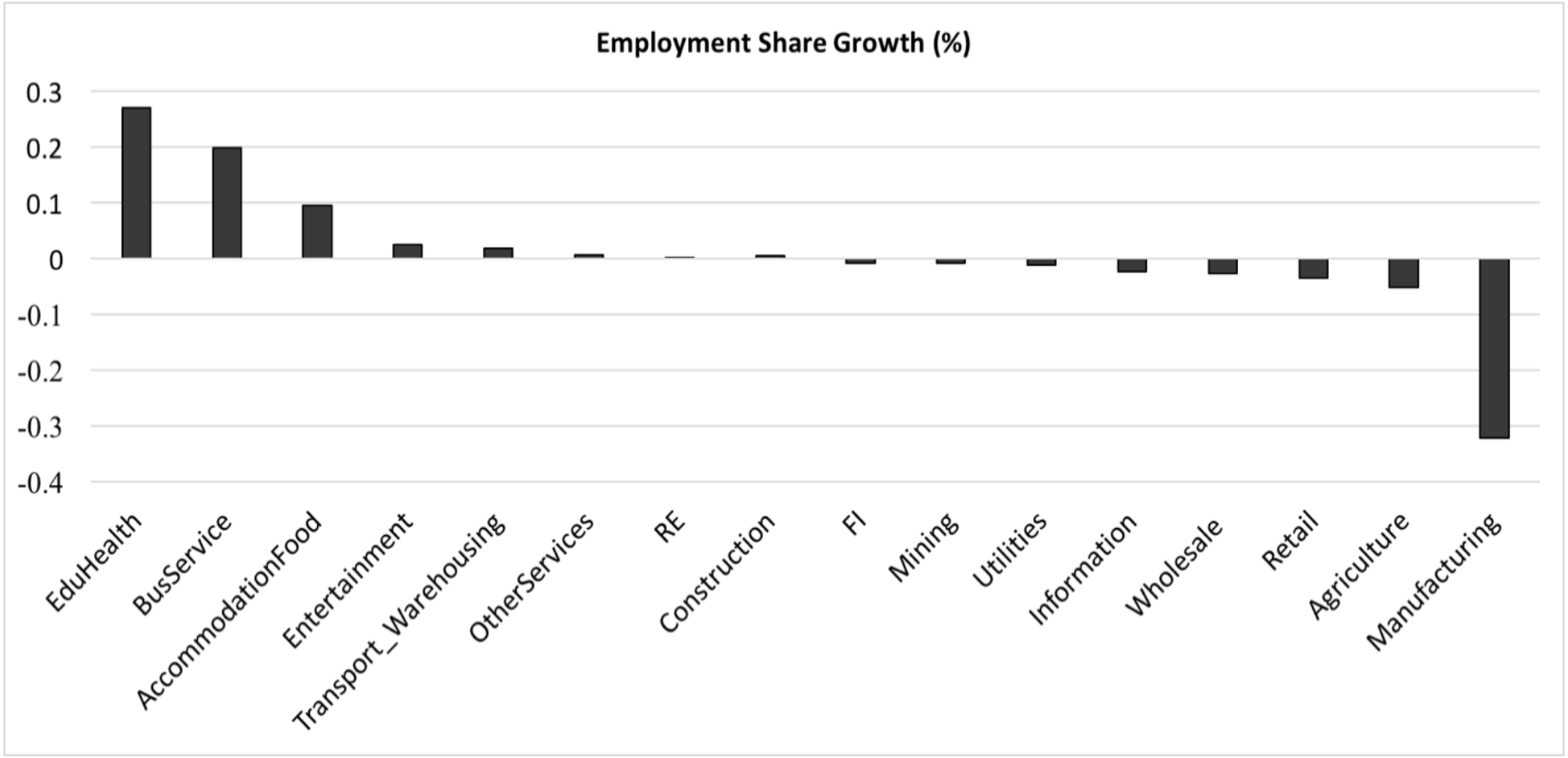
Dualism in production IV

- Education-health, business services, and accommodation-food are the big job creators. All have visible demand growth, low or negative productivity growth, and relatively low wages.
- Productivity offsets demand growth in manufacturing, wholesale and retail trade, finance-insurance, and information. Their employment shares fall. Aside from retail, all have high wages.
- Lewis process in reverse!

Employment share decomposition



Overall employment share growth



Dualism in production V

- “Real” output is defined as nominal output divided by an “appropriate” price index. So a sector with slowly growing prices has high relative productivity growth.
- In the data, terms of trade have shifted in favor of lagging sectors, consistent with their slow productivity growth (think of health care!)

Concentration of wealth I

- Big debate is how to value capital.
- Cambridge controversies – cost-based value of capital aggregate and profit rate are jointly determined (reswitching and all that). The market mechanism cannot by itself find a valuation, nor does a bigger capital stock necessarily lead to a lower profit rate.

Concentration of wealth II

- Three standard valuation methods
- Replacement cost – estimate aggregate capital using observed cost-based valuations of capital goods. Used by Fed and BEA.
- Use financial asset valuation to impute value of capital (Piketty & Co.)
- Or “capitalize” payments flows by dividing by a “representative” interest rate

Concentration of wealth III

- Balance sheet: For business, Fed's financial accounts basically sum up flows of funds over time to state that
- Capital at replacement cost
- = Debt + value of equity + net worth
- so that equity is treated as a "liability" and net worth is a residual. Tobin's *q* is ratio of equity value to capital. If *q* >> 1, business "net worth" can be negative.
- A capital gain on equity for its household holders is a (paper) capital loss for business.

Concentration of wealth IV

- During the roaring twenties, the richest 1% of households held one-half of total wealth. New Deal forced their share to fall to one-quarter in the 1960s. It is around 40% now.
- The Fed's financial accounts don't add up properly (reported holdings of "other" financial assets and equity exceed supplies). But…
- One-third of middle class wealth is concentrated in real estate. The top 1% holds bonds, other assets, and equity (more than 80% of their total).

Estimated wealth holdings

2014 (in Trillions)	CAPITAL		Debt securities	Other financial assets	Equity and investment funds share	Net Worth
	Real Estate	Other				
All Households	23.67	0.32	3.06	19.00	32.93	78.97
Lower 60%	2.08	0.02	-0.32	-1.99	1.02	0.81
Middle 61-99%	15.37	0.16	2.51	15.61	9.96	43.60
Top 1%	6.22	0.15	0.86	5.38	21.95	34.56
Firms	21.67	7.78	-4.93	1.54	-19.80	6.26
Gov't	11.11	0.99	-16.04	-1.64	0.52	-5.05
Financial Business	1.03	0.57	10.55	-12.09	-1.10	-1.04
ROW	-		7.36	0.75	-2.42	5.69
Col.sum	57.48	9.67	0.00	7.55	10.13	84.83

DISAGGREGATION OF HOUSEHOLDS						
	REAL ESTATE SHARE	OTHER CAPITAL SHARE	DEBT SECURITIES SHARE	OTHER FINANCIAL ASSETS SHARE	EQUITY & INVESTMENT FUNDS SHARE	NET WORTH SHARE
Bottom 60%	8.79%	5.58%	-10.48%	-10.48%	3.10%	1.02%
61-99%	64.94%	48.44%	82.18%	82.18%	30.24%	55.22%
Top 1 %	26.26%	45.97%	28.30%	28.30%	66.67%	43.76%

Concentration of wealth V

Capital gains of households on equity are roughly equal to business net retained earnings. In Fed accounts these gains are offset by paper “holding losses” of corporations.

So essentially all net profits get transferred to households, mostly the top 1%. Taking these flows into account suggests that wealth of the top households grows at around 4.5% per year (exceeds the growth rate of real profits) vs. 1.8% for the middle class.

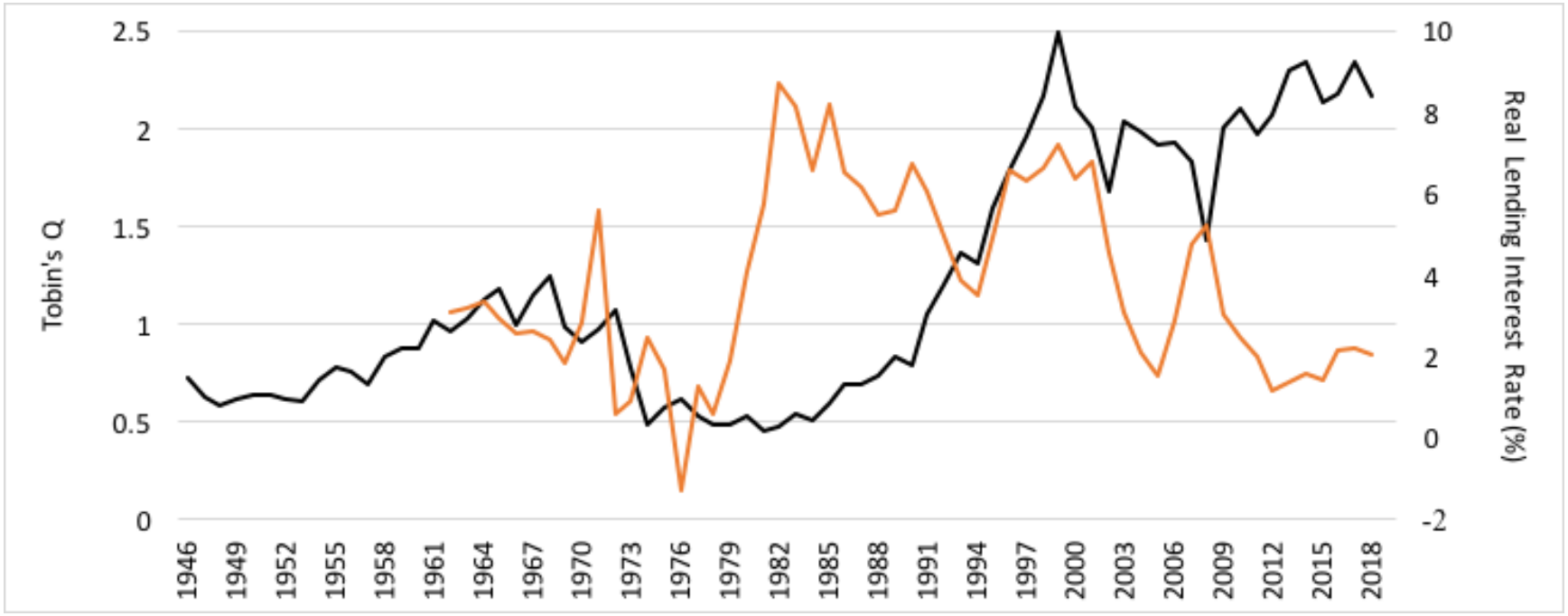
Concentration of wealth VI

- Share buybacks are basically a portfolio shift, less than 2% of household wealth per year. Business obtains cash to buy shares from households. Sources include increasing debt (most important), cutting investment, or recent corporate tax cuts. Buybacks don't appear to cut into business investment, but funds could be used to raise wages. Buybacks may be taxed at a low capital gains rate – a benefit to households.
- In flow-of-funds accounting new business debt has to be held by somebody, mostly households. So buybacks boil down to a equity-for-debt swap, not affecting household or business wealth. Interest, dividends, and capital gains meanwhile *add* 3% per year to household wealth.

Concentration of wealth VII

- The wealth share of the middle class cannot fall to zero because they have positive saving from wages, but according to Pasinetti-Meade accounting in a “long run” steady state, it might fall to around 30-40%.
- Finally, capital gains are a wild card. Does *q* obey reversion to mean? If so, trends in growth of wealth could reverse.
- Look at relationship between real lending interest rate and *q* – Volcker shock vs. Greenspan-Bernanke-Yellen-Powell put. May not last forever but meanwhile wage repression leads to low interest rates which via capital gains make rich households richer.

US real lending rate vs *q*



Underlying Causes of Inequality

- Wage repression is key.
- Then look at distributional trends from perspectives of “monopoly” power of business to push up prices against wages, or “monopsony” power to hold down wage growth.
- Also consider forces producing greater wealth inequality.

Wage Repression I

- Results described above show that changes in the structure of production have held down wages. There has also been rising inequality “within” sectors, but shifts of employment “between” are substantial.
- Wage growth < productivity growth occurs economy-wide. As already noted this differential cumulates over time to drive down the wage share – a macro level dynamic process.

Wage Repression II

- Mainstream explanations emphasize increasing concentration of firms that hire in specific labor markets.
- But higher firm- or sector-level concentration is a static shift and not macroeconomic. It does not appear to have risen steadily over 5 decades.
- More important are strong institutional shifts against labor's bargaining power:

Wage Repression III

Austerity, both in action and as an ideology supporting anti-labor interventions. It is a linchpin for…

Federal non-intervention, e.g. NLRB stalemate

State-level right-to-work laws

Divide-and-rule employment tactics in a “fissuring” labor market, such as

Non-poaching and non-competition clauses in contracts

Stagnant minimum wages (now gradually increasing)

Low employment ratio (but now increasing)

Wage Repression IV

- Trade and technology:

Globalization and outsourcing

Robots (the latest fad) Mostly important in automobile industry, boosting inequality across states and regions. Maybe 5-10% of jobs at high risk from automation (OECD)

Product Market Power I

Ideology background for less aggressive anti-trust intervention: Chicago, Jensen (shareholder value as opposed to Brandeis and corporate responsibility), Bork (only regulate price competition).

Product market concentration has been rising. There are also specific industry trends, e.g.

Platform companies using consumers' data for advertising, etc. (could be offset with "data dividend"?). But information and relevant parts of retail sectors are less than 10% of GDP

Product Market Power II

- Various micro studies beg the question of how the findings generalize to the macro or sectoral level, e.g.
- “Superstar” firms are a recent fad (Autor). They occupy the “fat tail” of an earnings distribution typically skewed to the right. Most employment and profits are generated by firms *not* in the tail.
- Their high productivity may drive down the average sectoral wage share. But then what are the institutional barriers that prevent workers in these firms from getting higher pay?
- Recent studies suggest that there is substantial churn among superstar firms and sectors. They do not have “super” sustained productivity growth.

Product Market Power III

- “Rents” are another mainstream trope (Stiglitz). Since Ricardo, they are understood as deriving from demand for a service or asset controlled by some economic actor. But then, what is the source of demand?
- The “real estate rental and leasing” sector generates >25% of total profits. Its own-profit share of value-added is very high (>90%).
- The own-profit and value-added shares have increased slowly. But as discussed above the sector is not a big source of *rising* profit inequality.

Product Market Power IV

- Highly paid executives are also said to receive their high incomes due to “rents.” Rents from what source of demand? What is the institutional basis?
- Anecdote: Statoil (Norway) and Conocophillips (USA) are comparable oil companies. The CEO of one gets <$2 million per year, the other gets >$20. What causes the difference?
- Rules of the game and institutions matter. What is social tolerance for extremely high pay? Certainly more US tolerance now than in the past, but that can change.

Simulation Model I

- Results from a Goodwin-Kaldor-Pasinetti simulation model.
- Baseline “balanced growth” run presupposes that growth rates of real wages and productivity are equal, reversing the 50-year trend. It would take the same amount of time to clean up the current distributional mess.
- Palma ratios will not come down steadily toward 1980s levels unless (i) wage growth for lower income groups exceeds productivity growth over time (ii) proprietors’ income for the top 1% falls; financial transfers to the top 1% fall.

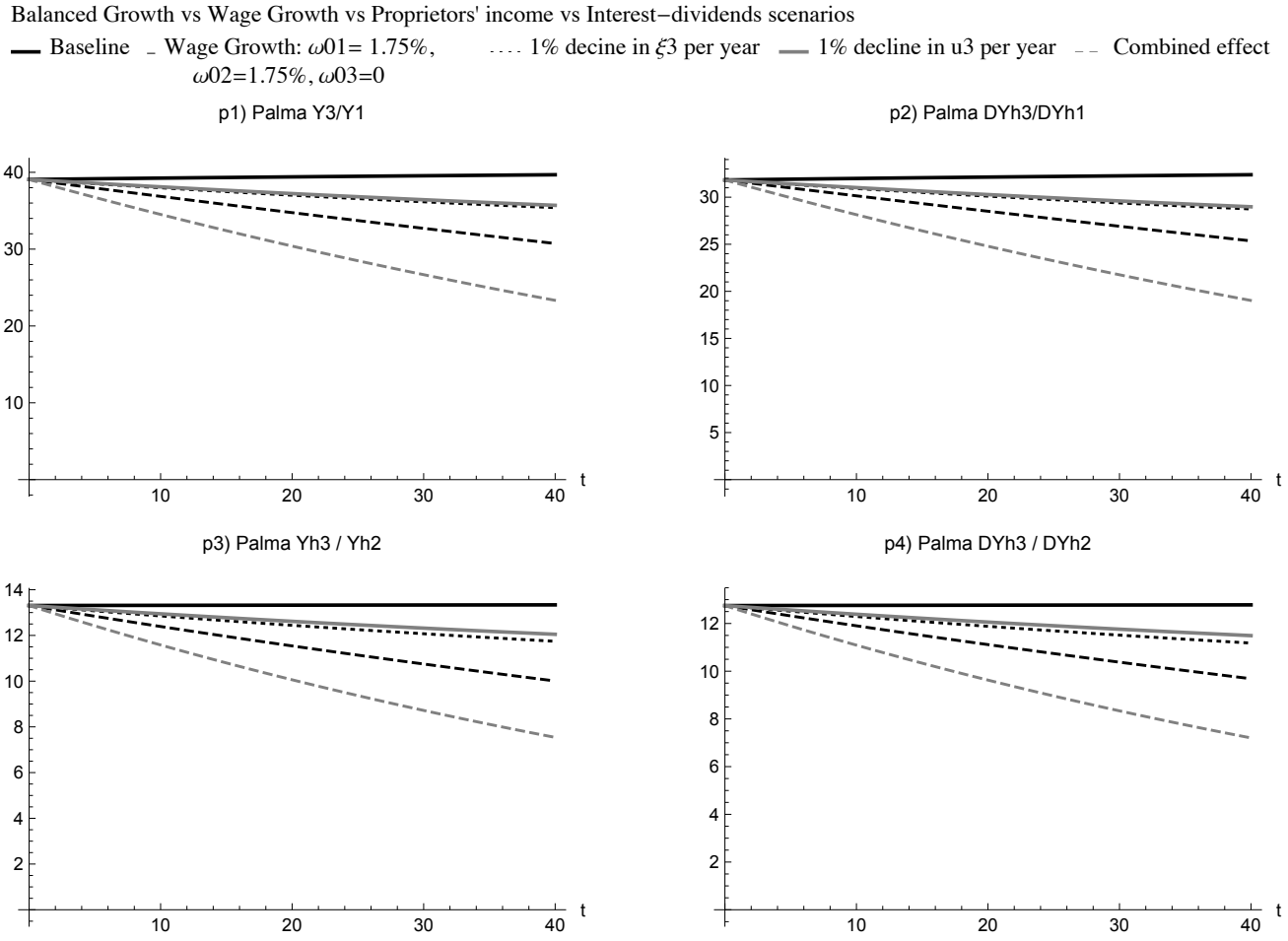
Simulation Model II

- Even so, the wealth share of the top 1% will rise from 40% to around 60%. A wealth fund (possibly financed by a capital gains tax) could offset, transferring money downward and building up its own resources.
- Conclusions are robust insofar as they build upon the double entry income and wealth accounting underlying the model. Policy is relevant only if it can support the distributional shifts in the simulations.

Distributional social accounting matrix, 2014 (trillions of dollars)

		Current Spending							Capital spending			
		Low 60%	Middle class	Top 1%	Bus	Gov.	RoW	Finan. income	HH Inv.	Bus Inv.	Gov Inv.	**Total agg. demand & incomes**
Costs of production												
HH		5.0	5.7	0.9		2.6	2.3		0.6	2.3	0.6	**20**
Low												**4.6**
Wage	2.2											
Non-wage	0.3					1.9		0.2				
Middle												**8.7**
Wage	6.3											
Non-wage	0.9					0.6		0.9				
Top												**2.8**
Wage	**0.8**											
Non-wage	**1.2**							**0.8**				
Bus												6.7
Net profit	2.2											
CCA	1.8											
Transfers							0.4	2.3				
Gov												5.4
Indir. tax	1.6	0.3	0.9	0.1								
Dir. tax		0.1	1.0	0.7	0.6							
Trans								0.1				
RoW												3.7
Import	2.9											
Trans					0.2	0.1		0.5				
Finan.												4.7
Outlays		0.1	0.2		3.5	0.6	0.5					
Total Cost & Outlays	**20**	5.5	7.8	1.7	4.3	5.8	3.2	4.8				
	Flows of saving, investment, and lending gross of CCA											
Low 60%		**-0.9**							-0.6			0.3
Middle			0.7									
Top 1%				1.1								
Bus					2.4					-2.3		0.1
Gov						-0.4					-0.6	-1.0
RoW							0.5					0.5

Palma ratios for combined effects of real wage growth for non-rich households and downward trends in financial and proprietors' incomes for the top one percent.



Palma and wealth ratios from combined distributive policies and a wealth fund with a 50% tax on capital gains which transfers 2% of its assets to the bottom sixty percent of households